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The attached documents are exact copies of the European patent application described on the following page, as originally filed.

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Patentanmeldung Nr. Patent application No. Demande de brevet n°

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Der Präsident des Europäischen Patentamts;
Im Auftrag

For the President of the European Patent Office

Le Président de l'Office européen des brevets
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**Blatt 2 der Bescheinigung
Sheet 2 of the certificate
Page 2 de l'attestation**

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Method and receiver for providing subtitle data in several languages on demand

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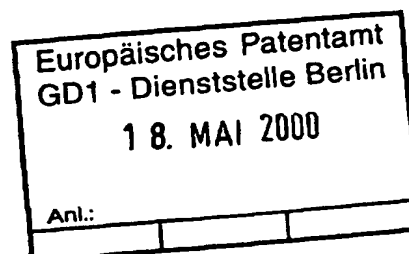
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See for original title page 1 of the description.

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Method and receiver for providing audio translation data on demand

The invention relates to the field of providing audio translation data on demand to a receiver.



Background

The number of television (TV) channels a user can receive has increased significantly because of the further development of terrestrial TV, satellite TV and web TV technology including digital TV transmission. In addition, video media, such as cassette, CD and DVD offer more programs or movies to the home.

Invention

The above developments lead also to an increased share of foreign language programs or movies. In an increasing number of countries or geographical regions there are multi-language requirements: there may be used more than one native language in one country or region, or non-native residents prefer to have their native language for home-entertainment. Therefore there is a growing need for broadcasting programs or movies with audio data or subtitles corresponding to a language translation preferred by the respective consumers.

30

A problem to be solved by the invention is to provide audio or subtitle translation data on demand. This problem is solved by the method disclosed in claim 1.

A receiver that utilises this method is disclosed in claim

9.

A method for providing corresponding audio or subtitle translation data on demand to such receiver is disclosed in claim 11.

5

One aspect of the invention is a method for providing audio or subtitle translation data on demand to a receiver, the method including the following steps:

- receiving video data;
- 10 - receiving first identification information corresponding to said video data;
- detecting a user-performed selection of a preferred language;
- providing second identification information corresponding
- 15 to said preferred language;
- transmitting, e.g. via Internet, third identification information derived from said first and second identification information to a server for requesting, based on said third identification information, a desired audio or subtitle
- 20 translation data set corresponding to said video data;
- receiving, e.g. via Internet, said selected audio or subtitle translation data set;
- reproducing, at least partly, data of said requested audio or subtitle translation data set temporally synchronised
- 25 with said video data.

According to another aspect, the invention concerns a receiver for providing audio or subtitle translation data on demand, the receiver including:

- 30 - means for receiving video data and first identification information corresponding to said video data;
- means for detecting a user-performed selection of a preferred language;
- means for providing second identification information cor-

responding to said preferred language;

- means for transmitting, e.g. via Internet, third identification information derived from said first and second identification information to a server for requesting, based on
5 said third identification information, a desired audio or subtitle translation data set corresponding to said video data;

- means for receiving, e.g. via Internet, said selected audio or subtitle translation data set;

10 - means for reproducing, at least partly, data of said requested audio or subtitle translation data set temporally synchronised with said video data.

According to a further aspect, the invention concerns a
15 method for providing audio or subtitle translation data on demand, including the steps:

- receiving, e.g. via Internet, identification information requested by a user, wherein said identification information corresponds to a preferred language and to video data that
20 are originally accompanied by audio or subtitle data in a language different from said preferred language;

- storing or generating audio or subtitle translation data sets assigned to different languages for related video data, wherein each of said audio or subtitle translation data sets
25 includes a language translation of original language audio or subtitle data related to specific ones of said video data;

- selecting, upon receiving said identification information, an audio or subtitle translation data set, wherein the selected audio or subtitle translation data set represents a
30 language translation of said original language audio or subtitle data corresponding to said preferred language,

- transmitting, e.g. via Internet, said selected audio or subtitle translation data set for providing it to a receiver

of said user.

The invention is based on the idea that different audio translation data sets are available in an archive, preferably an online archive. The different audio translation data sets can be ordered by a user of a television and/or video system. This allows the user to have a movie or film broadcast with audio signals corresponding to a language preferred him. For example, a visitor staying in a hotel of a foreign country can watch movies provided with audio signals corresponding to his native language.

The invention also allows to watch a movie, scientific programmes etc. in a certain foreign language or with subtitles in a certain foreign language in order to train the user's knowledge of this specific foreign language.

Drawings

Exemplary embodiments of the invention are described with reference to the accompanying drawings, which show in:

Fig. 1 a schematical representation of a system according to the invention;

Fig. 2 a simplified block diagram of an online translation archive.

Exemplary embodiments

Referring to Figure 1, the invention can be embodied in a system including a television and/or video device 1 for broadcasting a movie or film, an interface 2, and server means 3 to which several translator accounts 4 are assigned. The server means may be any kind of computer for operating a

database storing an archive of translation data. The server may be located at the broadcast station supplying the movie or film or at a company specialized on the supply of translation data.

5 The server means may be connected with a translator studio
5. A user may control the television or video device 1
and/or the interface 2 by means of a remote control 6 and/or
by voice control. The interface 2 may be contained in the
device 1, which device can be e.g. a settop-box or a TV re-
10 ceiver or video recorder.

If a user of the device 1 likes to watch a movie broadcast
in any language with audio signals in a preferred language,
a language menu can be provided on a display 14 of the de-
15 vice 1. By means of the language menu a list of several lan-
guage options is presented to the user of device 1, each of
the several language options representing audio translation
data of a different language and/or from a different trans-
lator. From the language menu the user can select a language
20 option corresponding to the language preferred by the user.
The selection of the language option may be performed by
means of the remote control 6 the transmitted commands of
which are received by an IR receiver 12 contained in device
1.

25 It is also possible to select a preferred language by a spo-
ken command, which is detected by a microphone. This micro-
phone can be integrated in the remote control or in the
housing of the device 1.

30 Furthermore, it is possible to select not only one preferred
language but a most preferred language and a second most
preferred language. In order to make this more clear, the
following example is given. If for instance a German user
stays e.g. in China and is not familiar with the Chinese

language but with e.g. the English language, he may choose German as the most preferred language and English as the second most preferred language. In this way, the German user will get translation data in German language, if these are
5 available. If not, he will receive translation data in English language, if these are available. Only if neither German nor English translation data is available, he has to watch the movie with the original language.

10 The user's selection of the language option is evaluated in means 13 for providing identification information corresponding to the preferred language and the video data of the movie the user intends to watch. The identification information is automatically passed using controlling means 11 to
15 an output of device 1, which output may be connected to the Internet or any other source providing data to the user's device. The identification information may include the title of the movie or some other identification code extracted from VPS data, teletext data, MPEG7 data or an EPG (Electronic Program Guide).
20

The identification information is transmitted to a server 3, preferably through an interface 2 with online connection like an ISDN connection or any other Internet or cable connection.
25 After processing the identification information the server 3 will supply audio translation data to the interface 2 via a back channel or via the Internet or cable. The audio translation data may be compressed, e.g. by means of MP3 or MPEG4 standard. The device 1 will provide video data received from a broadcasting station 7 in synchronization with
30 the audio translation data received from server 3, so that the user can watch the movie with audio signals and/or subtitles corresponding to the language preferred by him.

Also it is possible that the server sends back only an information about the availability of the languages of audio signals and/or subtitles for the selected title. This information can be accompanied by an information about the cost
5 for downloading the translation data. The information about the available languages can be displayed by a second on-screen display, possibly together with the cost. The user then finally decides whether he wants downloading of the translation data.

10

The controlling means 11 may control synchronization of the video data and the audio translation data by means of time stamps provided in the video data as well as the audio translation data. If the video data are encoded according to
15 the MPEG-4 standard, resynchronization marker codes, which are inserted in the video data stream at certain intervals, can be used for synchronization. If the audio data are also MPEG-4 encoded, not the total audio signal but only the voices to be translated can be transmitted due to the object
20 oriented transmission. This allows a very low transmission bit rate.

The audio translation data provided to device 1 may be intermediately stored at least partly, e.g. on a hard disc or
25 other storage devices.

In the means 13 for providing identification information, or in the controlling means 11, the user's language selection, or selections, may be stored permanently or for a predetermined period of time so that, always or during the predetermined period of time, audio translation data corresponding
30 to the stored preferred language selection will be automatically delivered to the device 1 whenever the user wants to watch a movie, without it being necessary to display the

language menu on the display 14. For example, for a period staying in a hotel abroad, a visitor will have the opportunity to watch movies in the hotel with audio translation data corresponding to his native language, if a respective
5 language selection made by the visitor is stored.

The service of providing translation data on demand may be free of charge or charged, wherein the user's payment can be controlled by means of the interface 2 or controlling means
10 11.

Referring to Figure 2, in the server means 3 the audio translation data are arranged e.g. in translator accounts 10, 11, 12, each being related to a translator A, B and C, respectively, as schematically shown in Figure 2. A translator
15 A may have a respective account for German (account 10 in Figure 2), English, French (account 13 in Figure 2) and/or other languages. There may be more than one set of audio translation data available in the server means 3, each set representing, for example, a German translation for a
20 specific movie and generated by a different translator, giving the user the opportunity to select German audio translation data for the specific movie from a preferred translator.

25

Translators may generate audio translation data in the translator studio 5. The translator studio 5 provides a user-friendly website interface, technical support and translation guidance to the translators. An online connection may be established between the translator studio 5 and
30 the server means 4 to transmit audio translation data. The translator may set up a new translator account, add new audio translation data to the account 4 or delete previous version from the account 4. Audio translation data may be

stored as text and/or voice data. In addition, the translator studio 5 may provide online payment to the translators.

It is possible to assign the required functions to different
5 units: for instance, providing identification information
can be accomplished in interface 2 whereby means 13 can be
omitted and IR receiver 12 is connected directly to control-
ling means 11.

10 The audio or subtitle translation data set mentioned above
can be a data set including the complete sound track/sub-
title track of one program or one movie.

In connection with recording a program or movie using pro-
15 gramming, in particular VPS or ShowView programming, it is
advantageous to either automatically download and intermedi-
ately store the audio or subtitle translation data set in
advance, or to download and record the audio or subtitle
translation data set during or after finishing the recording
20 of the related video data and possibly original audio/sub-
title data.

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Claims

1. Method for providing audio or subtitle translation data on demand to a receiver (1), the method including the following steps:
- receiving (11) video data;
 - receiving first identification information corresponding to said video data;
 - detecting (6, 12) a user-performed selection of a preferred language;
 - providing (13, 2) second identification information corresponding to said preferred language;
 - transmitting, e.g. via Internet, third identification information derived from said first and second identification information to a server (3) for requesting, based on said third identification information, a desired audio or subtitle translation data set corresponding to said video data;
 - receiving (11), e.g. via Internet, said selected audio or subtitle translation data set;
 - reproducing (15), at least partly, data of said requested audio or subtitle translation data set temporally synchronised with said video data.
2. Method according to claim 1, further comprising the step of displaying (14) a language menu and detecting (6, 12) the user-performed selection of the preferred language from said language menu.
3. Method according to claim 1 or 2, wherein from several available server-stored audio or subtitle translation data sets one is selected, wherein each of said several audio or subtitle translation data sets includes a language translation of original language audio or subtitle

data related to said video data, and wherein the selected audio or subtitle translation data set represents, corresponding to said preferred language, a language translation of said original language audio or subtitle data.

4. Method according to any of claims 1 to 3, wherein said user-performed selection is detected, and said provided second identification information corresponding to said preferred language is stored, before said video data are received.
5. Method according to claim 4, wherein said video data are recorded using programming, e.g. VPS or ShowView programming, and wherein said audio or subtitle translation data set is either automatically downloaded and intermediately stored in advance, or is downloaded and recorded after finishing the recording of the related video data and possibly original audio or subtitle data.
6. Method according to any of claims 1 to 5, wherein time stamps are used for synchronizing said video data with the data of said requested or selected audio or subtitle translation data set.
7. Method according to claim 6, wherein the data are MPEG-4 encoded and resynchronization marker codes are used for synchronizing.
8. Method according to any of claims 1 to 7, wherein said first identification information is automatically provided from corresponding teletext or MPEG7 information.

9. Receiver (1) for providing audio or subtitle translation data on demand, the receiver including:
- means (14) for receiving video data and first identification information corresponding to said video data;
 - 5 - means (6, 12) for detecting a user-performed selection of a preferred language;
 - means (13, 2) for providing second identification information corresponding to said preferred language;
 - means (11) for transmitting, e.g. via Internet, third
10 identification information derived from said first and second identification information to a server (3) for requesting, based on said third identification information, a desired audio or subtitle translation data set corresponding to said video data;
 - 15 - means (11) for receiving, e.g. via Internet, said selected audio or subtitle translation data set;
 - means (15) for reproducing, at least partly, data of said requested audio or subtitle translation data set temporally synchronised with said video data.
- 20
10. Receiver according to claim 9, further comprising means (14) for displaying a language menu, wherein said detecting means (6, 12) detect the user-performed selection of the preferred language from said language menu.
- 25
11. Method for providing audio or subtitle translation data on demand, including the steps:
- receiving (3), e.g. via Internet, identification information requested by a user, wherein said identification
30 information corresponds to a preferred language and to video data that are originally accompanied by audio or subtitle data in a language different from said preferred language;
 - storing or generating (A, ..., D) audio or subtitle

translation data sets assigned to different languages
for related video data, wherein each of said audio or
subtitle translation data sets includes a language
translation of original language audio or subtitle data
related to specific ones of said video data;

5

- selecting, upon receiving said identification informa-
tion, an audio or subtitle translation data set, wherein
the selected audio or subtitle translation data set
represents a language translation of said original lan-
guage audio or subtitle data corresponding to said pre-
ferred language,

10

- transmitting (3), e.g. via Internet, said selected audio
or subtitle translation data set for providing it to a
receiver of said user.

15

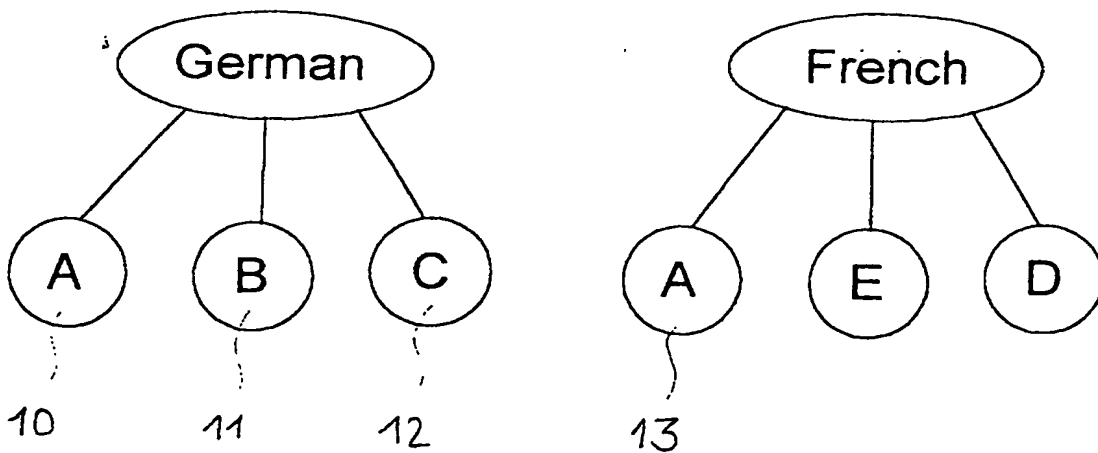
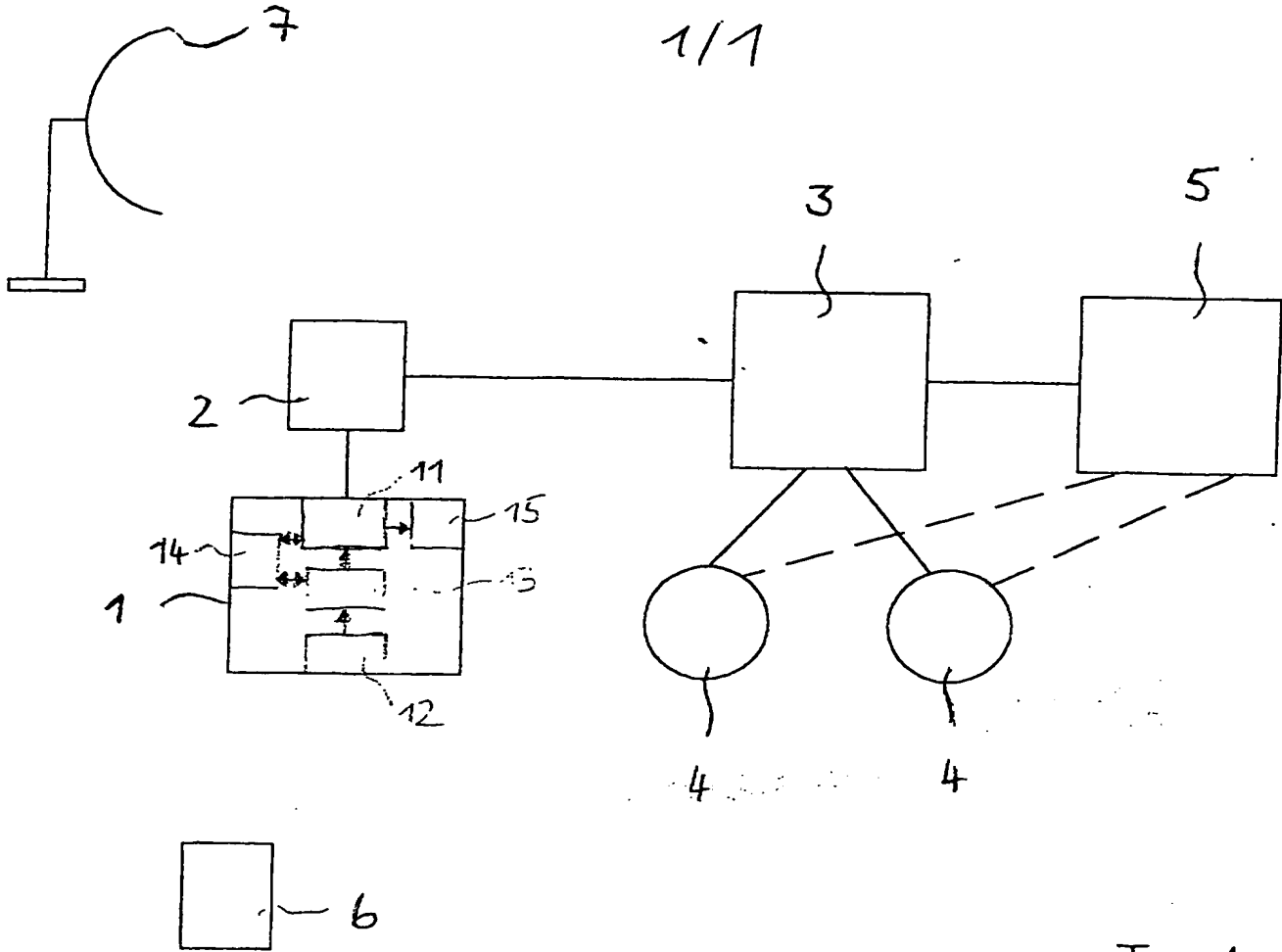
Abstract

Video data are transmitted to a receiver. A language menu is displayed from which a user selects a language that can be
5 different from the original language broadcast with the video data. Video data identification information and language identification information corresponding to the language selected from the menu is derived and transmitted to e.g. an Internet server. The identification information is
10 used to select an audio translation data set from several audio translation data sets stored in said server, wherein each of said several audio translation data sets includes a language translation of original audio data related to said video data. The selected audio translation data set is sent
15 to the receiver and reproduced synchronously together with said video data.

Fig. 1

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